

# Jason B. Kirkland

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## **ENGINEERING PROFILE**

Mechanical Engineering junior with hands-on experience in mechanical design, CAD modeling, prototyping, and engineering analysis. Strong interest in complex mechanical systems, high-reliability product development, and manufacturing-driven design. Proven ability to perform under demanding operational constraints through Division I athletics. Seeking a Summer 2026 mechanical engineering internship focused on product design, mechanical systems, manufacturing, or hardware development.

## **EDUCATION**

**Cornell University – College of Engineering** | Ithaca, NY

BS, Mechanical Engineering

Minor: Business – Dyson School of Applied Economics & Management

Expected May 2027

## **ENGINEERING PROJECT EXPERIENCE**

**Multifunction Hand Tool Design & Prototype | Mechanical Design – Cornell University**

- Designed and modeled a compact, multi-function hand tool using Fusion 360, optimizing component layout to reduce overall volume while maintaining structural integrity.
- Developed parametric CAD assemblies and iterated designs based on manufacturability and ergonomic constraints.
- Selected materials and design features to withstand expected loading during use (hand torque, bending, impact).
- Fabricated and tested physical prototypes using 3D printing, validating fit, tolerances, and usability.
- Led final design review and presented functional prototype to faculty and peers.

## **TECHNICAL SKILLS**

### **Mechanical Design & Analysis**

- CAD Modeling & Assemblies (Autodesk Fusion 360)
- Parametric design methodologies
- Engineering drawings, tolerances, and documentation
- Design for manufacturability (DFM)

### **Programming & Engineering Tools**

- Python
- MATLAB

### **Manufacturing & Prototyping**

- 3D printing
- Mechanical assembly and testing with prototypes

### **Core Engineering Knowledge**

- Statics, Dynamics
- Thermodynamics
- Fluid Mechanics
- Materials Engineering Fundamentals

## **LEADERSHIP & PROFESSIONAL EXPERIENCE**

**Cornell Varsity Football – Division I Student-Athlete** | Ithaca, NY

**Aug 2023-Present**

- Balance 20+ hours/week of Division I athletics with a rigorous Mechanical Engineering curriculum.
- Developed elite time management, accountability, and performance under pressure.
- Mentor younger teammates and contribute to team leadership culture.

**Certified Lifeguard – Hurricane Harbor Water Park** | Peoria, AZ

**May-July 2023**

- Maintained safety standards and responded to emergency situations in high-traffic aquatic environments.

**Life Scout – Boy Scouts of America** | Arizona

**2013-2022**

- Held multiple leadership roles including Patrol Leader, Assistant Patrol Leader, and Historian.
- Earned the rank of Life Scout, demonstrating long-term commitment, leadership, and service.
- Volunteered as a Den Chief, mentoring and leading younger scouts.

### **Additional Experience**

- Harkins Movie Theatre, Crew Member | Peoria, AZ
- Leadership Council – Mountain Ridge High School Varsity Football | Glendale, AZ